

CLAIMS

Suff B1

1. An optical module comprising:
a mounting member having a principal surface;
an interconnect formed on said mounting member; and
an optical element mounted on said principal surface
and electrically connected to said interconnect,
wherein said mounting member is an optical waveguide
for guiding light emitted from said optical element or
light admitted to said optical element.

5

10

2. The optical module as defined in claim 1,
wherein a light-admitting aperture or light-emitting
aperture of said optical element is disposed opposing said
principal surface.

15

3. The optical module as defined in claim 2,
wherein a light-reflecting member is provided on said
optical waveguide; and
wherein light is transmitted between said optical
element and said optical waveguide through said light-
reflecting member.

20

25

4. An optical module comprising:
an optical element for emitting or admitting light;
and
an optical waveguide having a principal surface, with

1
said optical element mounted on said principal surface, for
guiding light emitted from said optical element or light
admitted to said optical element.

5 5. The optical module as defined in claim 4,
wherein said optical element and said optical
waveguide are fixed with an adhesive member having light
transmitting characteristics interposed between said
optical element and said optical waveguide in such a way
10 that the position of emission or admission of light of said
optical element opposes said optical waveguide, and are
subjected to bare chip mounting.

6. The optical module as defined in claim 5,
15 wherein said optical waveguide has a modifying
portion whereby the direction of progress of said light is
changed; and
wherein said optical element is positioned to overlie
said modifying portion.

20
Mark
7. The optical module as defined in claim 4,
wherein a semiconductor element is further mounted on
said principal surface in addition to said optical element;
and
25 wherein said optical element and said semiconductor
element are integrally sealed with a resin.

scribble D3
8. The optical module as defined in claim 5,
wherein a semiconductor element is further mounted on
said principal surface in addition to said optical element;
and

5 wherein said optical element and said semiconductor
element are integrally sealed with a resin.

9. The optical module as defined in claim 6,
wherein a semiconductor element is further mounted on
10 said principal surface in addition to said optical element;
and

wherein said optical element and said semiconductor
element are integrally sealed with a resin.

15 10. The optical module as defined in claim 7, wherein
said resin has light blocking characteristics.

11. The optical module as defined in claim 8, wherein
said resin has light blocking characteristics.

20

12. The optical module as defined in claim 9, wherein
said resin has light blocking characteristics.

25 13. The optical module as defined in claim 7, wherein
said semiconductor element has a function of driving said
optical element.

14. The optical module as defined in claim 8, wherein said semiconductor element has a function of driving said optical element.

5 15. The optical module as defined in claim 9, wherein said semiconductor element has a function of driving said optical element.

claim 4

A A 13. 16. The optical module as defined in ~~any of claims 4 to~~
10 ~~15~~, wherein a circuit is laminated directly on said principal surface.

17. An optical module comprising:

an optical element; and

15 a mounting member which has a function of an optical waveguide for guiding light emitted from said optical element or light admitted to said optical element and is electrically connected to said optical element or a semiconductor element associated with said optical element.

20

18. An optical module comprising:

a mounting member having a principal surface and a lateral surface; and

an optical element mounted on said principal surface,

25 wherein said mounting member has a function of an optical waveguide, and an optical input/output terminal for said optical waveguide is provided on said lateral surface.